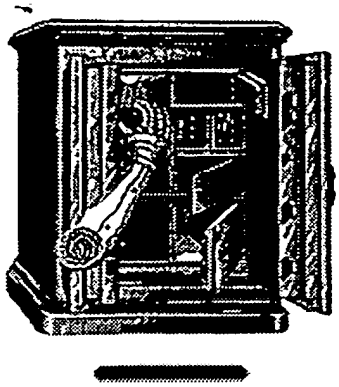

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(19)(CA) **APPLICATION FOR CANADIAN PATENT** (12)

(54) Substituted N-Heteroaroylguanidines, a Process for Their Preparation, Their Use as a Medicament or Diagnostic Agent, and a Medicament Containing Them

(72) Kleemann, Heinz-Werner - Germany (Federal Republic of) ;
Lang, Hans-Jochen - Germany (Federal Republic of) ;
Schwark, Jan-Robert - Germany (Federal Republic of) ;
Weichert, Andreas - Germany (Federal Republic of) ;
Scholz, Wolfgang - Germany (Federal Republic of) ;
Albus, Udo - Germany (Federal Republic of) ;

(71) Hoechst Aktiengesellschaft - Germany (Federal Republic of) ;

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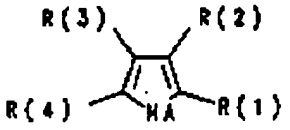
HOE 94/F 094 Dr.v.F.

Abstract

Substituted N-heteroaroylguanidines, a process for their preparation, their use as a medicament or diagnostic agent, and a medicament containing them

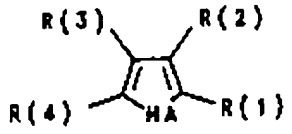
The invention relates to heteroaroylguanidines of the Formula I



in which the substituents HA and R(1) to R(5) have the meanings given in claim 1.
These compounds exhibit very good antiarrhythmic properties, as are important for treating diseases which occur, for example, in association with symptoms of oxygen deficiency. As a consequence of their pharmacological properties, the compounds are outstandingly suitable for use as antiarrhythmic pharmaceuticals possessing a cardioprotective component for the prophylaxis and treatment of infarction and for the treatment of angina pectoris, in connection with which they also inhibit or strongly reduce, in a preventive manner, the pathophysiological processes associated with the genesis of ischemically induced damage, in particular associated with the elicitation of ischemically induced cardiac arrhythmias. On account of their protective effects against pathological hypoxic and ischemic situations, the compounds of the formula I according to the invention can, as a consequence of inhibiting the cellular Na^+/H^+ exchange mechanism, be used as pharma-

THE EMBODIMENTS OF THE INVENTION IN WHICH AN EXCLUSIVE PROPERTY OR PRIVILEGE IS CLAIMED ARE DEFINED AS FOLLOWS:

1. A heteroaroylguanidine of the formula I



in which:

HA is SO_m, O, or NR(5),

m is zero, 1 or 2,

R(5) is hydrogen, (C_1-C_8)-alkyl or $-C_{am}H_{2am}R(81)$,

am is zero, 1 or 2

R(81) is (C_3-C_8)-cycloalkyl, or phenyl which is not substituted or is substituted by 1-3 substituents from the group F, Cl, CF_3, methyl, methoxy or NR(82)R(83), with R(82) and R(83) being H or CH_3;

or

R(81) is (C_1-C_9)-heteroaryl which is linked via C or N and which is unsubstituted or is substituted by 1-3 substituents from the group F, Cl, CF_3, CH_3, methoxy, hydroxyl, amino, methylamino, or dimethylamino;

one of the two substituents R(1) and R(2) is $-CO-N=C(NH_2)_2$,

and whichever is the other is hydrogen, F, Cl, Br, I, (C_1-C_3)-alkyl, -OR(6), C_rF_{2r+1}, $-CO-N=C(NH_2)_2$ or -NR(6)R(7),

R(6) and R(7) are, independently, hydrogen or (C_1-C_3)-alkyl,

r is 1, 2, 3 or 4,

R(3) and R(4) are, independently of each other, hydrogen, F, Cl, Br, I, -C≡N, $X-(CH_2)_p-(C_qF_{2q+1})$, $R(8)-SO_{bm}$, R(9)R(10)N-CO, R(11)-CO- or R(12)R(13)N-SO_2-,

where the perfluoroalkyl group is straight-chain